reciprocity in the relationship. Despite a higher frequency of contact (perhaps women who felt more depressed sought out network members for help), depressed subjects generally reported receiving less emotional support from their network members.

There is general agreement in the literature as to the importance of spouse and family relationships in the social network of new mothers. Valmai (1976) describes the importance of a supportive doctor and claims that she/he renders a significant effect on the new mother's experience of childbirth. Kaplan and Blackman (1969) cite husband, family, doctor and hospital staff as the most important network members present for a woman at the time of childbirth.

Conclusion

It is clear from the literature that the quality and quantity of social support received by women is a significant factor related to psychological adaptation in the postpartum. Emotional support is repeatedly cited as a correlate of emotional health. As in locus of control studies, the effects of social support when combined with other variables viewed as influencing postpartum depression, are largely unexplored. It follows therefore, that social support in the present study, needs to be included, along with neonatal birth risk and locus of control, as a variable possibly related to postpartum depression.
2.4 The Obstetrical Realm

"All those damned machines, I mean who did they think was having the baby, a robot?"

"Most medical things were difficult for me to accept, but as labour progressed, I realised what was happening, and eventually accepted them without much difficulty".

Increased medical involvement in the process of birth has been mooted as a contributary factor in the development of postpartum depression (Oakley and Chamberlain, 1981). Extensive debate concerning the methods and practice of childbirth has emerged over the past decade. Most criticisms have been directed against increasing technology in the delivery room.

2.4.1 The History of Technology in Childbirth

The technology of childbirth began with the forceps, first used in the seventeenth century by surgeons as a means of hastening slow labours (Rich 1976). The annulment of pain by ether-inhalation was discovered by a Georgia doctor in 1842; both ether and nitrous oxide were shortly after used by dentists and the term "anaesthesia" became accepted (Huntingford, 1978). In 1847, using ether in a case of childbirth, James Simpson in Scotland, showed that contractions of the uterus would continue even if the woman was unconscious, and proceeded to experiment with and use chloroform to relieve the pains of labour. In the 1920's
various forms of anaesthesia were developed specifically for labour. "Twilight sleep", a compound of morphine and scopolamine was widely used. The subsequent development of caudal or saddle-block anaesthesia meant that a woman could remain conscious and see her baby born, though she was paralysed from the waist down (Rich, 1978).

Blum (1980) writes that two of the most popular advancements have been the examining table and straps. The examining table was developed on instruction by Louis XIV so that he and the physician could view the birth process "without making eye contact with the expectant mother" (Blum, 1980, p. 253). The procedure became increasingly popular and the supine position for women in labour became mandatory in the West. The second most popular development were the straps. They came in various shapes, sizes, and with varying purposes, all were ways of tying down and containing. These included uterine supports, pessaries in the mid-1800's to keep the uterus from falling out, and corsets in the Victorian era to hold the abdomen in and to keep the outside world from knowing that the woman participated in sexual intercourse. Stirrups and straps in the 1920's to keep a woman from interfering in the process, foetal heart monitors, with belts surrounding the contracting abdomen and later, an electrode attached to the foetal scalp in utero and connected by a cord into a machine have been used. Surgery techniques have also heralded the caesarean section as a more common procedure.
Oakley (1980) claims that in Britain, childbirth first came under medical management when six 'lying-in' establishments were created in London from 1739 to 1765. She writes that for a long time women continued to give birth at home, helped by the midwife or untrained women. In 1902 midwives came under state control, and in the following years concern with the falling population focused medical attention on the health of mothers. At first, hospital was advocated only for a small number of high-risk mothers; later for all mothers. In 1927 the hospital confinement rate was 15 per cent; in 1947 it was 96 per cent. By 1975, 99 per cent of first babies were born in hospital (Oakley, 1980).

In the 1980's, hospital births and a number of technological procedures are standard practice in most Western countries. The following is a list of some common procedures which are performed (Oakley, 1980):

- Regular antenatal checkups
- Iron and vitamin supplements
- Vaginal examinations in pregnancy
- Ultrasound monitoring of pregnancy
- Hospital birth
- Enemas or suppositories in first stage of labour
- Shaving of perineal or pubic hair in labour
- Artificial rupture of the membranes
- Pharmacological induction of labour (oxytocin, prostaglandins)
- Vaginal examinations in labour
- Bladder catheterization in labour
- Mechanical monitoring of the foetal heart
- Mechanical monitoring of contractions
- A glucose or saline drip in labour
- Epidural analgesia in labour
- Analgesics such as pethidine and tranquillisng injections in labour
- Birth in a horizontal or semi-horizontal position
- Episiotomy
- Forceps or vacuum extraction of the baby
- Cutting the umbilical cord immediately after birth
- Accelerated delivery of the placenta by injection of ergometrine and/or oxytocin and pulling on the cord.

Developments in the arena of childbirth have been received with mixed acclaim. Criticism from a number of different sectors has been voiced. These criticisms fall into three broad categories, the physiological, political and psychological.

2.4.2 Physiological Criticisms

"If I had known the effects of those pain-killers before, I would never have taken them. They really knocked me and I lost out on what was really going on".

"The worst were those contractions. Next time I don't want my labour speeded up".
Physiologically, the effectiveness of these techniques in helping both the high-risk mother and baby cannot be denied. The enormous benefits, in terms of decrease in the incidence of death and damage to babies and mothers, which medical advances have brought about, are extensive. Most writers are in agreement that it is only possible to examine the negative effects of these developments in the knowledge that both mother and baby have an optimal chance of survival (MacFarlane, 1977).

Oakley (1980) claims that many of the standard birth procedures were introduced into obstetric practice without a systematic evaluation of their effectiveness.

"Disadvantages and dangers for mother and child are apparent in many, and most continue to be used routinely and without regard for their iatrogenic (illness-producing) qualities" (Oakley, 1980, p. 18).

This controversial claim has received support from several authors. Brook (1976), Driefus (1978) and Welburn (1980) argue that "prevention can be worse than cure" (Welburn, 1980, p. 60). They criticize modern obstetrics which they claim imposes high-risk methods on normal deliveries, thereby regarding healthy women as ill and incapable.

Richards (1978) questions the unexamined assumption that the hospital is a safer place of birth than domiciliary confinement. He argues that readily available techniques and
instruments are extensively and unnecessarily used in hospital and create a greater need for further high-risk procedures. Induction and acceleration of labour methods have received much criticism for their increasing usage (Kitzinger, 1975). Richards (1978) states that induction of labour can be life-saving in a few specific situations, such as toxaemia in the mother or an overdue baby, but high medical risks are also associated with it. Bonnar (1975) argues that accelerated labour creates stronger contractions which can give rise to foetal distress and the subsequent need for caesarean sections. Chalmers (1975) continues this argument and claims that because induction and acceleration of labour produces stronger and more painful contractions of the uterus, higher levels of pain-killing drugs tend to be used.

According to Aleksandrowicz (1974), Bowes, Brackbill, Conway and Steinschneider (1970) and Scanlon (1974), the usual drugs given to relieve pain in labour pass via the placenta to the baby. Most of them have the effect of depressing the baby's breathing at birth and inhibiting sucking during the first week or more of life. Because of the depressive effect on infant sucking, lactation may be harder to establish and the initial relationship of mother and baby may be made more difficult (Dunn and Richards, 1977).
Epidural analgesia deadens sensation in the lower abdomen. The side-effect of permanent paralysis has been documented (Richards, 1978). Epidural analgesia is also seen as one of the factors accounting for the rise in forceps deliveries with which bruising of the infant's head is associated (Dunn and Richards, 1977). The commonest technique of active management, artificial rupture of the membranes and intravenous oxytocin, was shown by Chamberlain, Chamberlain, Howlett and Clamaux (1975) to produce three times the rate of respiratory depression in babies. Foetal monitoring is used to measure the foetal heart rate in many cases of induction and labour acceleration where potential hazards to the foetus are greater. Attachment to monitoring devices means that the mother must be relatively immobile and the electrode attachment to the baby's head can give rise to complications (Richards, 1978).

Artificial rupture of the membranes has been criticised in terms of the foetus. Calder (1976) states that intact membranes may afford some protection to the foetus during labour. In labour with intact membranes, placental circulation appears to be better than after rupture and the forewaters reduce pressure on the baby's head. The use of oxytocin, forceps and epidurals has been associated with the increased number of jaundiced infants (Chalmers, 1975). Although jaundice is treatable it can require intensive intervention, including blood transfusion, and it is a
frequent cause for the admission of a baby to a special-care unit. X-rays in pregnancy are associated with the usual risks x-rays introduce and damage to the foetus has been documented (Richards, 1978). Chalmers (1975) points out that initially unnecessary interventions create a need for increased necessary interventions.

2.4.3 Political Criticisms

"I feel extreme frustration at not being at home now, at not being with my husband, and not being able to share these vital first days with him. I am angry at being kept in an institution, amongst strangers, who treat you as if you were sick. I am also angry that those who should be most involved in the birth are alienated from it and that it is so controlled by the medical profession."

"I'm glad I had a woman gynae, she was so sensitive to how I felt. She told me she'd had three of her own, so she really knew!"

Political criticisms of increased technology in childbirth are largely rooted in feminist ideology. The reassessment of the position of women in society has rendered one of the major social changes of the century (Macfarlane, 1977). The philosophy, process and practice of childbirth has received a considerable amount of attention in the light of these changes. Few studies have tested the scientific validity of the feminist argument and at present it exists essentially at a hypothetical level.
Fundamental in their argument is:

i) a critique of childbirth practice which they claim is largely male-dominated;

ii) the emergence of technological procedures which fail to place women at the centre of the birth process, rendering them unnecessarily passive and ultimately deprived of the total experience of childbirth;

iii) imposed hospital practices which deny women any real choices in methods of delivery.

Rich (1976) describes the exclusion of women from the medical profession in the nineteenth and early twentieth century as laying the foundation for male-dominated obstetrics. Midwives were forbidden usage of new developments such as the forceps, thereby annexing childbirth to the male arena. Dreifus (1978) argues that the domination of men in obstetrics is inappropriate as their obvious lack of experience prevents them from operating in the best possible interests of the mother.

Rich (1978) claims that there are certain valid reasons for the prevention of exertion by the mother - such as heart disease, tuberculosis or a previous caesarean section. However, she questions what psychic effect a state of semihelplessness (anaesthesia) has on a healthy mother, awake during the birth yet unable to participate actively, her legs
in stirrups, her wrists strapped down, her physical engagement with the birth process minimized by drugs and by her supine position. Rich argues that "freedom from pain" through these methods, like sexual "liberation", places a woman physically at the disposal of men though still estranged from her body.

Eichholz (1980) outlines the history of birth services. She says that control of birth services has changed hands several times throughout history. Originally the province of the mother and midwife, it later became the responsibility of the developing medical profession in the West. Finally, it entered the sphere of the hospital, where drugs and technology predominately control the process, guided by the twentieth century obstetrician.

Development and innovation in the management of childbirth has taken place at an unparalleled rate. Currently, birth services in Europe and the United States have assumed a dual direction. The first is toward home birth and family-centered maternity care, which many have seen as a frightening, emotional regression into the past (Blum, 1980). Others see it as a way for women to regain control of their own natural bodily processes (Blum, 1980). The second direction is toward complete obstetric management including drugs, machines, and surgery (Blum, 1980). Central to each has been the individual woman—her psyche, fears, joys—her
unconscious. The woman's psychology has had a profound effect on the course of birth services (Eichholz, 1980).

Three major points of transition all extending over long periods of time are apparent in the history of birth practices. The change from female midwife to male midwife and later physician; the relocation of the birth scene from home to the lying-in hospital and then from lying-in hospital to technological management within neonatal centres in medical facilities. At present, another period of transition appears possible according to Blum (1980) - from technological management to family-centered birth with minimal obstetric interventions.

Blum (1980) writes that the history of childbirth services contains a fundamental contradiction. She claims that as women have historically become more emancipated, the choices they make in birth experiences appear to be more and more removed from a natural, normal, internal process to one where control is not only put predominately in the hands of a person of another sex, but in the control of asexual mechanical devices which give the illusion of protection and safety, but, in reality, may be quite the opposite. Blum (1980) argues that during the three major changes described above, the birth experience moved further and further away from one where the woman had little anatomic knowledge of herself, to one where the knowledge was available, but where
it was invested in others, outside of, rather than inside, herself. She claims that women have deferred to the outsider's control because of a probable, persistent underlying unconscious feeling that to do otherwise was to risk death.

Differing opinions exist within the feminist school. Shulamith Firestone, an early radical feminist sees childbearing as a victimizing experience in patriarchal society (Firestone, 1972). "Pregnancy is barbaric," she declares and "childbirth hurts" (Firestone, 1972, p. 198).

"She discards biological procreation from this shallow and unexamined point of view, without taking account of what biological pregnancy and birth might be in a wholly different political and emotional setting" (Rich, 1977, p. 153).

Firestone advocates artificial reproduction and believes that technology that removes the experience from the woman herself is optimal. This radical view has no support among other feminists.

Jordan (1974), an anthropologist studying childbirth in different cultures, criticizes hospital practice in the West. Her point is not that medical interference should never occur, but that childbirth in the West is a "culturally produced event", pursued with the same relentless consistency of method without regard for individual aspects of labour. She writes that episiotomies are justified as preventing
tearing in the perineum, but that tearing is much more likely when a woman gives birth in the common lithotomy position than when squatting on a birthstool, or (as in Yucatan) supported in a hammock. Forceps deliveries are also more frequently required in the lithotomy position, where the full force of gravity cannot aid the expulsion of the child.

Jordan (1974) stresses that in cultures as different as Sweden and Yucatan women have a part in the decisions relating to their deliveries, while in the United States and Britain, less choice is offered. She writes that the Yucatan midwife emphasizes that every woman has to find her own way and that it is the midwife's task to assist with whatever decision is made. Jordan claims that this does not mean that births are painless, but that needless pain is avoided, and the woman's individual temperament and physique are treated with respect.

Eicholz (1980) and Wertz and Wertz (1977) criticize women themselves for their unchallenging acceptance of technologized childbirth. Wertz and Wertz (1977) state that while most women welcome more humanizing birth methods, most still defer to medical judgement about medicalization and would find any other arrangement unthinkable. They claim that women are eager and passive consumers of medicine, depending on doctors, drugs and hospitals to produce health for themselves and their children rather than depending on themselves and on inner strength of natural process. They
conclude that "most women acquiesce in the view of childbirth as potential disease" (Wertz and Wertz, 1977, p. 235). Eicholz (1980) argues that advancements in technological society have lowered the pain threshold of women. This leaves them increasingly dependent on drugs and other artificial methods of pain relief.

Arms (1975) and Oakley (1980) have emerged as two of the most important proponents of the new feminist childbirth approach. They call for woman-controlled childbirth and attempt to demystify and rehumanize the entire birth and postpartum period. They are in agreement that there was no golden age in which women gave birth both safely and effortlessly, and believe that it would be a backward step to condemn the whole of modern obstetrics. Oakley (1980) writes that:

"the quality of medical care depends on the extent to which interventions of proven effectiveness are properly applied to those who can benefit from them"

(Oakley, 1980, p. 23).

Arms and Oakley believe in women making their own choices on where, when and how they are to deliver. The power and control of the total experience must be reallocated to women. They write that infant and mother are a continuum, and that sensitive treatment of one is incomplete without sensitive treatment of the other. Finally, they call for the abolition of the view of childbirth as an illness and claim that it should be reinstated as the normal, healthy and potentially fulfilling experience that it is.
2.4.4 Psychological Criticisms

"The caesar was painful - maybe I would have felt better if I had known I was going to have it."

"I feel a bit deprived now. I don't feel like I really 'gave birth'."

Criticisms of technologized childbirth from a psychological perspective have been largely concerned with the effects of caesarean section deliveries. Although there is agreement in the literature that medical procedures are related to psychological adjustment in the postpartum period, there is a marked paucity of literature describing specific interventions and their relationship to specific psychological outcome.

Hausknecht (1978) writes that:

"becoming a new mother always requires emotional adjustments, but becoming a new caesarean mother adds its own special components simply because of the route the baby took coming into the world" (Hausknecht, 1978, p. 147).

Lipson (1982b) points out that:

"caesarean surgery leaves scars, not just the scar you can see on your abdomen or the one hidden away on the wall of your uterus, but emotional scars that often last just as long and can hurt more" (Lipson, 1982b, p. 18).
Current figures in the United States show that one out of every six infants born is by caesarean section (Richards, 1978). This increasingly common birth procedure involves physical discomfort and a recovery period far greater than that associated with a normal vaginal delivery. In addition, a caesarean birth usually separates husband from wife, mother from infant, and all of them from taking a direct part in the birthing process (Hausknecht, 1978). Criticism of this separation, has resulted in an increase of epidural cesars, where the mother is more awake and aware during the birth. The increase in caesarean sections seems to reflect the increased availability of techniques, such as foetal monitoring, which allows obstetricians to anticipate when vaginal delivery may prove dangerous to the foetus (Grossman et al., 1980). Rather than risk an unpredictable vaginal delivery, a caesarean section is performed.

i. Criticism of caesarean births

This obstetrical procedure has become controversial, with some professionals praising the increasing rate of caesarean deliveries as an improvement, and others pointing out the additional maternal risks, disability, and financial burden which abdominal delivery entails (Hibbard, 1976; Jones, 1976). It is now well documented that in terms of the birth experience, and adjustment in the early postpartum period, women who have had caesarean sections have a more difficult time adjusting (Jones, 1976). Most do not expect this type
of birth; childbirth classes and obstetricians rarely prepare women for it (Hibbard, 1976), and it carries additional postoperative discomfort and psychological tensions (Grossman, et al. 1980).

The postoperative pain and other physical after-effects of a caesarean delivery contribute to additional difficulties in the postpartum period (Jones, 1976). The recovery from this major surgical procedure and the resulting emotional disappointment put additional physiological and psychological stress on the new mother. In addition, the mother's postpartum condition may have detrimental effects on the very earliest mother-infant interactions and bonding patterns (Grossman et al., 1980).

Hausknecht (1978) states that a caesarean birth that has been planned ahead does not carry the same emotional impact as a surgical birth that comes as a surprise and is performed in haste and tension, leaving the women with no time to adjust, accept or prepare. This is especially true if it is performed after many hours of active labour. The most commonly documented psychological effects of a caesarean birth are disappointment, anger, feelings of failure and sadness (Affonso and Stichler, 1978; Cohen, 1977; Hausknecht, 1978; Lipson, 1982b).
Willmuth (1975) determined that being self-sufficient, feeling autonomous, being an active participant, and the experience of maintaining control, were the most important factors determining a positive birth outcome. Cohen (1977) states that in all these areas, caesarean mothers are deprived of these feelings. Resulting feelings of failure and guilt contribute to the appearance of depressive symptoms in the postpartum period (Affonso and Stichler, 1978). Anger at the inability to function, and self-criticism, may predominate the new mother's thoughts (Affonso and Stichler, 1978). Cohen (1977) describes women's feelings of dissatisfaction with a caesarean birth. She notes feelings of incompleteness as women, a lack of fulfilment in the biological realm, and a denied sexuality, as important concomitants of a caesarean delivery.

ii. Caesarean sections and marital stress

Stress on the marital relationship has been extensively discussed (Cohen, 1977). The woman's perception of herself as a woman, wife and childbearer may be influenced by her perception of her husband or mate's views of her in this role of caesarean mother. Lipson (1982a) points out that fathers experience many of the same feelings as women who have had caesarean births. Women perceive the father's anger, disappointment, grief and sense of failure, and respond accordingly. A major source of the father's emotional response to the caesarean birth centers on his not being
able to witness or participate (Affonso and Stichler, 1978). Father participation in the caesarean birth, according to Affonso and Stichler would lessen the feeling of loss for the father and minimize the sense of abandonment the mother feels. Reynolds (1977) advocates family-centred caesarean births to minimize depressive adjustment.

Support groups for caesarean parents have been suggested (Cohen, 1977; Hausknecht, 1978; Lipson, 1982a and Lipson, 1982b). This would offer information, social support, and a platform for parents to express fears and anxieties regarding their roles and the infant's health. Morginsky (1982), after conducting such a support group found a more favourable outcome for parents attending groups than for those who did not.

iii. Criticism of other birth interventions

Very few studies have been conducted to explore the relationship between other birth interventions and psychological adjustment. Cartwright (1977) found that in a study of 2000 women who had experienced induction, 78% claimed that they would prefer not to have another and rather allow the baby to be born naturally and in its own time. Yang (1976) found increased drug use during labour to be associated with tension and depression.